



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,322	07/22/2003	William Noonan	RPS920030144US1	7299
39698	7590	05/21/2007	EXAMINER	
DUKE W. YEE			AHN, SANGWOO	
YEE & ASSOCIATES, P.C.				
P.O. BOX 802333			ART UNIT	
DALLAS, TX 75380			PAPER NUMBER	
			2166	
			MAIL DATE	
			DELIVERY MODE	
			05/21/2007	
			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**MAILED**

**MAY 21 2007**

*Technology Center 2100*

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/624,322  
Filing Date: July 22, 2003  
Appellant(s): NOONAN, WILLIAM

\_\_\_\_\_  
Rakesh Garg

For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 11/28/2006 appealing from the Office action mailed 8/22/2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

U.S. Patent Number 6,550,674 issued to Yoram Neumark

U.S. Publication Number 2002/0174025 issued to John R. Hind et al

U.S. Publication Number 2002/0178013 issued to Beth Louise Hoffman

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 3 – 5, 7 – 12, 14 – 16, 18 – 20 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Number 6,550,674 issued to Yoram Neumark (hereinafter "Neumark").

As per claim 1, Neumark discloses,

A method for updating a retail planogram comprising the steps of

Art Unit: 2166

reading an electronic transmission from at least one RFID tag in a retail environment located in proximity to a product, using a personal shopper device having a location sensing mechanism (column 4 lines 65 – 66, et seq.), a memory (column 4 lines 52 – 54, et seq.), a software means (data file creating capability means there is a software), and an RFID reader (column 4 line 51, column 5 lines 57 – 58, et seq.), wherein an initial planogram is stored therein (Figure 1, column 5 lines 36 – 64, column 6 lines 6 - 42, et seq.),

collecting said read electronic location information transmitted from said at least one RFID tag by said shopper device (column 4 lines 52 – 56, column 5 line 57, et seq.),

analyzing and comparing said collected location information by said software means of said shopper device, with said initial planogram in relation to initial location information of said product with collected location information for said product from said collected information (column 7 line 48 – column 8 line 5, et seq.),

updating said initial location information for said product in said initial planogram in response to collected location information to provide an updated planogram to display current location information for said product in a current planogram arrangement in said retail environment (column 7 line 48 – column 8 line 5, et seq.).

As per claim 3, Neumark discloses said RFID tag is an RFID shelf tag (column 4 lines 50 – 52, column 6 lines 6 – 9, et seq.).

Art Unit: 2166

As per claim 4, Neumark discloses transmitting said analyzed information to a retail server wherein a database map of product locations is generated in relation to their respective RFID shelf tags (Figure 1, column 4 lines 50 – 60, et seq.).

As per claim 5, Neumark discloses said read electronic information includes unique product identifiers and unique location identifiers indicating unique information about products in said retail environment (column 6 lines 35 – 42, et seq.).

As per claim 7, Neumark discloses said method is performed by a retailer (column 4 lines 36 – 40, column 6 lines 6 – 12, et seq.).

As per claim 8, Neumark discloses all product labels in said retail environment are RFID shelf tags (column 4 lines 50 – 52, column 6 lines 6 – 9, et seq.).

As per claim 9, Neumark discloses generating an updated planogram (column 7 line 48 – column 8 line 5, et seq.).

As per claim 10, Neumark discloses,

A system for updating a planogram comprising,

a personal shopper device having a location sensing means, a software means and an RFID reader (Figure 1, column 4 line 47 – column 5 line 3, et seq.)

a retail system comprising a database in communication with said shopper device (Figure 1, column 4 lines 50 – 60, et seq.),

an initial planogram stored in said database (column 8 lines 1 – 3, et seq.), and

one or more product RFID shelf labels positioned in a retail environment (column 4 lines 50 – 52, column 6 lines 6 – 9, et seq.),

wherein said RFID reader is capable of reading an electronic transmission from at least said one or more RFID shelf labels using said personal shopper device and transmitting collected read electronic information to said database, wherein said initial planogram is updated in response to collected read electronic information by said software means and said database is updated with a current planogram reflecting said collected read electronic information (column 4 line 65 – column 5 line 3, column 7 line 48 – column 8 line 5, et seq.).

As per claim 11, Neumark discloses said software means is software that compares initial product location information with collected product location information and identifies differences there between (column 7 line 48 – column 8 line 5, et seq.).

As per claim 12, Neumark discloses said location sensing means reads coordinates from known location points within said retail environment to determine a coordinate location point of said shopper device at an instant of time (column 4 line 56 – column 5 line 3, column 7 lines 25 – 41, et seq.).

As per claim 14, Neumark discloses said RFID shelf label further comprise visible product information including per unit price (Figure 1 elements 20 and 30, et seq.).

As per claim 15, Neumark discloses said RFID label transmits electronic information including unique product identifiers and unique location identifiers indicating unique information to said RFID reader (column 6 lines 35 – 42, et seq.).

As per claim 16, Neumark discloses all product labels in said retail environment are RFID shelf tags (column 4 lines 50 – 52, column 6 lines 6 – 9, et seq.).

Art Unit: 2166

As per claim 18, Neumark discloses a printer for printing an updated planogram (column 8 lines 5 – 6, et seq.).

With respect to claim 19, Neumark discloses,

A system for generating an updated planogram in a retail environment comprising,

a portable shopper device having a location sensor, comparative software and an RFID reader (Figure 1, column 4 line 47 – column 5 line 3, et seq.),

a retail system comprising a server, a database in communication with said shopper device,

a wireless communication network (Figure 1, column 4 lines 50 – 60, et seq.),

an initial planogram stored in said database (column 8 lines 1 – 3, et seq.), and

a plurality of product RFID shelf labels positioned in proximity to each of their respective products, wherein said RFID reader reads product location information electronically transmitted from at least one of said plurality of product RFID shelf labels using said personal shopper device and said comparative software compares initial product location information of said initial planogram with said read product location information and updates said initial planogram in response to said read product location information and said database is updated with a current planogram in relation to said read product location information (column 4 line 65 – column 5 line 3, column 6 lines 7 – 14, column 7 line 48 – column 8 line 5, et seq.).



With respect to claim 20, Neumark discloses said database stores said initial planogram and said current planogram concurrently (column 7 line 48 – column 8 line 5, et seq.).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumark in view of U.S. Publication Number 2002/0174025 issued to John R. Hind et al (hereinafter "hind").

As per claim 2, Neumark discloses the method of claim 1 as discussed above in 35 U.S.C. 102(a) rejection section.

Neumark does not explicitly disclose said device is fixedly mounted to a shopping cart.

However, Hind discloses said device fixedly mounted to a shopping cart (Figure 3, paragraph 12). It would have been obvious to a person of ordinary skill in the data processing art to combine the above two references because the combination would have provided targeted advertising and personalized service to the customer using the display device on the shopping cart (paragraph 12).

As per claim 6, Neumark discloses the method of claim 3 as discussed above in 35 U.S.C. 102(a) rejection section.

Art Unit: 2166

Neumark does not explicitly disclose said method is performed by a consumer.

However, Hind discloses said method performed by a consumer (Figure 3, paragraphs 9 – 14). It would have been obvious to a person of ordinary skill in the data processing art to combine the above two references because the combination would have provided targeted advertising and personalized services (such as providing various product information) to customers using wireless communication devices (paragraph 9)

As per claim 13, Neumark discloses the system of claim 11 as discussed above in 35 U.S.C. 102(a) rejection section.

Neumark does not explicitly disclose said shopper device is a hand-held device having a display in wireless communication with said retail system.

However, Hind discloses said shopper device being a hand-held device having a display in wireless communication with said retail system (Figures 1 – 2, 4 – 5). It would have been obvious to a person of ordinary skill in the data processing art to combine the above two references because Hind's display device would have enabled Neumark's system to provide visual display to users to enhance personalized services, such as providing various information of a certain product.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neumark in view of U.S. Publication Number 2002/0178013 issued to Beth Louise Hoffman (hereinafter "Hoffman").

As per claim 17, Neumark discloses the system of claim 11 as discussed above in 35 U.S.C. 102(a) rejection section.

Neumark does not explicitly disclose a display for displaying an updated planogram.

However, Hoffman discloses a display for displaying an updated planogram (paragraph 36). It would have been obvious to a person of ordinary skill in the data processing art to combine the above two references because Hoffman's planogram display device would have enabled Neumark's system to provide visual display to users to enhance personalized services, such as providing location information of a certain product (paragraph 2 – 3).

#### **(10) Response to Argument**

Appellant's arguments filed on 11/28/2006 have been fully considered but they are not persuasive.

#### **Appellant mainly argued:**

1. With respect to claim 1, Neumark does not teach, "wherein an initial planogram is stored therein."
2. With respect to claim 10, Neumark does not teach, "an initial planogram stored in said database."
3. With respect to claim 2, the Examiner has failed to state a prima facie obviousness rejection because the proposed combination does not teach all of the features of claim 2, since Neumark does not anticipate claim 1.

Art Unit: 2166

4. With respect to claim 2, the Examiner has not stated a proper teaching, suggestion or motivation to combine the references.

5. With respect to claim 2, no teaching, suggestion, or motivation exists to combine the references.

6. With respect to claim 2, no teaching or suggestion exists to combine the references because each reference represents a complete solution to the problem that each solves.

7. With respect to claim 2, the Examiner used impermissible hindsight when fashioning the rejection.

8. With respect to claim 2, Neumark and Hind would not be combined by one of ordinary skill in the art because they address different problems.

9. With respect to claim 17, the Examiner has failed to state a prima facie obviousness rejection because the proposed combination does not teach all of the features of claim 17, since Neumark does not anticipate claim 10.

10. With respect to claim 17, the Examiner has not stated a proper teaching, suggestion or motivation to combine the references.

11. With respect to claim 17, no teaching, suggestion, or motivation exists to combine the references.

12. With respect to claim 17, no teaching or suggestion exists to combine the references because each reference represents a complete solution to the problem that each solves.

Art Unit: 2166

13. With respect to claim 17, the Examiner used impermissible hindsight when fashioning the rejection.

14. With respect to claim 17, Neumark and Hoffman would not be combined by one of ordinary skill in the art because they address different problems.

**Examiner respectfully traverses the Appellant's arguments for the following reasons:**

1. Neumark clearly indicates information within the R&C device that reads on what Appellant defines as "planogram" stored in the reader. The R&C device is a reader and is programmed a method to read labels to identify inventory items and also their locations, and create a data file within the device (software means: column 4 lines 52 – 53, column 6 lines 19 – 20, et seq.) containing information such as item description, item serial or stocking number, item count or quantity, item date, and so on, as expressly disclosed in claim 6 lines 35 – 37. Based on this fact, it is essential to have the program as discussed above stored in the R&C reader so it would perform the method of reading labels. Even though these records can be transmitted between remote devices (computers), they are essentially stored within the device as soon as it reads the labels. In addition, the planogram as defined in the specification of Appellant's invention merely states "how a retailer's configure a layout of their respective stores." Given the broadest reasonable interpretation, this definition could mean a variety of things and is unclear whether it deals with method used to configure a layout of stores, or product information, product location information, store location,

Art Unit: 2166

store layout, etc. Based on the definition given in the specification, Appellant's argument that the planogram stored in the reader does not exist in the prior art is irrelevant due to its lack of clarity as to what it means by "how a retailer's configure a layout of their respective stores." Even if the planogram is defined in detail, for example, "a store layout that provides information regarding product location and status," Examiner believes it would still be disclosed in the prior art since the R&C device reads labels to determine the nature or identity of inventory items and also their locations. Consequently, analyzing and updating steps recited in the claim is disclosed in the prior art as well, as the "planogram" stored in the reader in discussion is disclosed as explained above.

2. Appellant's second argument is traversed for the similar reasons as discussed above. The information regarding inventory items can be stored in both R&C device itself and the remote databases (column 6 lines 6 – 40, et seq.).

3. Since all the features of independent claim 1 are disclosed in the prior art Neumark, there is no deficiency that needs to be cured by the secondary reference. Therefore, the proposed combinations in claim 2 rejection teach all of the features recited in the dependent claim.

4. Appellant's allegation that, the combination cannot be accomplished since each reference represents a complete solution to the problem that each solves, is improper. Question is whether there is something in prior art as whole to suggest desirability, and thus obviousness, of making combination.

In response to Appellant's argument that there is no suggestion to combine references as to make the combination proper, Examiner respectfully submits that there are three possible sources for a motivation to combine references:

*"Reason, suggestion, or motivation to combine two or more prior art references in single invention may come from references themselves, from knowledge of those skilled in art that certain references or disclosures in references are known to be of interest in particular field, or from nature of problem to be solved;" Pro-Mold and Tool Co. v. Great Lakes Plastics Inc. U.S. Court of Appeals Federal Circuit 37 USPQ2d 1626 Decided February 7, 1996 Nos. 95-1171, -1181.*

In this case, Neumark is interested in an inventory management system in wireless environment to provide user of the system with accurate inventory information (column 6 lines 12 – 15, et seq.). Similarly, Hind's disclosure deals with a system for providing personalized customer services to customer in a wireless manner so that the customer can, for example, scan RFID-tagged products as the customer shops and communicate the scanned product information to the customer's wireless communication device (paragraph 14 lines 9 – 13, et seq.). In addition, Neumark and Hind both try to provide a wireless system with easily updatable service/inventory information to better in-location customer experience with instant information. Reason, suggestion, or motivation to combine these two references in single invention comes from knowledge of those skilled in art that certain references or disclosures in references are known to be of interest in particular field, or from nature of problem to be solved.

Art Unit: 2166

5. In response to Appellant's argument that there is no teaching, suggestion, or motivation to combine references as to make the combination proper, Examiner respectfully submits that there are three possible sources for a motivation to combine references:

*"Reason, suggestion, or motivation to combine two or more prior art references in single invention may come from references themselves, from knowledge of those skilled in art that certain references or disclosures in references are known to be of interest in particular field, or from nature of problem to be solved;" Pro-Mold and Tool Co. v. Great Lakes Plastics Inc., U.S. Court of Appeals Federal Circuit 37 USPQ2d 1626 Decided February 7, 1996 Nos. 95-1171, -1181.*

Appellant's allegation that Neumark is a warehouse, or retail operations oriented application and not a customer-oriented application is biased. First of all, any individual using the system, whether he/she is in a warehouse or a supermarket, is in fact a customer. Second, it is clear that Neumark's the system can be implemented in a customer-oriented application as well, such as inside a grocery store or a supermarket (column 6 lines 21 – 26, et seq.). In response to Appellant's argument that Neumark and Hind are directed towards solving two completely different problems, Examiner also disagrees. In this case, Neumark is interested in an inventory management system in wireless environment to provide user of the system with accurate inventory information by using RFID reader and labels (column 6 lines 12 – 15, et seq.). Similarly, Hind's disclosure deals with a system for providing personalized customer services to customer in a wireless manner so that the customer can, for example, scan RFID-



Art Unit: 2166

tagged products as the customer shops and communicate the scanned product information to the customer's wireless communication device (paragraph 14 lines 9 – 13, et seq.). In addition, Neumark and Hind both try to provide a wireless system with easily updatable service/inventory information. Reason, suggestion, or motivation to combine these two references in single invention comes from knowledge of those skilled in art that certain references or disclosures in references are known to be of interest in particular field, or from nature of problem to be solved.

6. Appellant's allegation that, the combination cannot be accomplished since each reference represents a complete solution to the problem that each solves, is improper. Question is whether there is something in prior art as whole to suggest desirability, and thus obviousness, of making combination.

7. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

8. In response to Appellant's argument that Neumark and Hind are directed towards solving two completely different problems, Examiner also disagrees. Question is whether there is something in prior art as a whole to suggest desirability, and thus

Art Unit: 2166

obviousness, of making combination. In this case, Neumark is interested in an inventory management system in wireless environment to provide user of the system with accurate inventory information by using RFID reader and labels (column 6 lines 12 – 15; 19 – 25, et seq.). Similarly, Hind's disclosure deals with a system for providing personalized customer services to customer in a wireless manner so that the customer can, for example, scan RFID-tagged products as the customer shops and communicate the scanned product information to the customer's wireless communication device (paragraph 14 lines 9 – 13, et seq.). In addition, Neumark and Hind both try to provide a wireless system with easily updatable service/inventory information. Reason, suggestion, or motivation to combine these two references in single invention comes from knowledge of those skilled in art that certain references or disclosures in references are known to be of interest in particular field, or from nature of problem to be solved.

9. Since all the features of independent claim 10 are disclosed in the prior art Neumark, there is no deficiency that needs to be cured by the secondary reference. Therefore, the proposed combinations in claim 17 rejection teach all of the features recited in the dependent claim.

10. First, the planogram is already disclosed in Neumark as previously discussed. Second, the Examiner disagrees with Appellant's argument that Hoffman's display as a "planogram display" is erroneous because Hoffman's product location information is simply a map and not a planogram. Planogram as defined in the specification of the present invention merely states that it is "how a retailer's configure a

Art Unit: 2166

layout of their respective stores.” Appellant asserts that the planogram is far more informative than Hoffman’s product location information (a map as referred to by the Appellant) but the assertion is untrue based on the definition given in the specification. Planogram is not further defined in the claim either, thus, fails to incorporate all the meanings and capabilities mentioned in Appellant’s argument. The location information or the map displayed on the device disclosed in the prior art is sufficient to anticipate the Appellant’s “planogram”.

Appellant’s allegation that Neumark is concerned with inventory management, not personalized services to the customers is biased. First of all, any individual using the system, whether he/she is in a warehouse or a supermarket, is in fact a customer. Second, it is clear that Neumark’s system can be implemented in a customer-oriented application as well, such as inside a grocery store or a supermarket (column 6 lines 21 – 26, et seq.). Following allegation that, the combination cannot be accomplished since Neumark represents a complete solution to the problem that it solves, is improper. Question is whether there is something in prior art as a whole to suggest desirability, and thus obviousness, of making combination. In this case, Neumark is interested in an inventory management system in a wireless environment to provide user of the system with accurate inventory information (including location) by using RFID reader and labels (column 6 lines 12 – 15; 19 – 25, et seq.). Hoffman’s disclosure deals with a system for providing product location information to customer in a transportable manner by displaying it on a display screen of a device (paragraph 14 lines 9 – 13, et seq.). In addition, Neumark and Hind both try to provide a system with

Art Unit: 2166

easily updatable and presentable inventory/product location information. Reason, suggestion, or motivation to combine these two references in single invention comes from knowledge of those skilled in art that certain references or disclosures in references are known to be of interest in particular field, or from nature of problem to be solved.

11. In response to Appellant's argument that there is no teaching, suggestion, or motivation to combine references as to make the combination proper, Examiner respectfully submits that there are three possible sources for a motivation to combine references:

*"Reason, suggestion, or motivation to combine two or more prior art references in single invention may come from references themselves, from knowledge of those skilled in art that certain references or disclosures in references are known to be of interest in particular field, or from nature of problem to be solved;" Pro-Mold and Tool Co. v. Great Lakes Plastics Inc. U.S. Court of Appeals Federal Circuit 37 USPQ2d 1626 Decided February 7, 1996 Nos. 95-1171, -1181.*

In this case, Neumark is interested in an inventory management system in wireless environment to provide user of the system with accurate inventory information (including location) by using RFID reader and labels (column 6 lines 12 – 15; 19 – 25, et seq.). Hoffman's disclosure deals with a system for providing product location information to customer in a transportable manner by displaying it on a display screen of a device (paragraph 14 lines 9 – 13, et seq.). In addition, Neumark and Hind both try to provide a system with easily updatable and presentable inventory/product location

Art Unit: 2166

information to improve in-store experience for customers. Reason, suggestion, or motivation to combine these two references in single invention comes from knowledge of those skilled in art that certain references or disclosures in references are known to be of interest in particular field, or from nature of problem to be solved.

12. Appellant's allegation that, the combination cannot be accomplished since each reference represents a complete solution to the problem that each solves, is improper. Question is whether there is something in prior art as whole to suggest desirability, and thus obviousness, of making combination.

13. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

14. It is very clear that Neumark and Hoffman address similar problems. Neumark is interested in an inventory management system in wireless environment to provide user of the system with accurate inventory information (including location) by using RFID reader and labels (column 6 lines 12 – 15; 19 – 25, et seq.). Hoffman's disclosure deals with a system for providing product location information to customer in a transportable manner by displaying it on a display screen of a device (paragraph 14

Art Unit: 2166

lines 9 – 13, et seq.). In addition, Neumark and Hind both try to provide a system with easily updatable and presentable inventory/product location information to improve in-store experience for customers.

**(11) Related Proceeding(s) Appendix**


No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

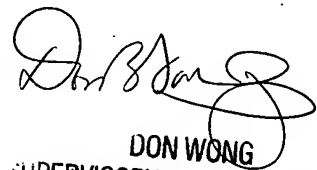
Respectfully submitted,

Conferees:

Tim Vo

  
SPE 2168

Don Wong

  
DON WONG  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100

Sangwoo Ahn

